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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,444	03/19/2001	Alfred Busch	CM2107/DO	2144

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EXAMINER

KUMAR, PREETI

ART UNIT	PAPER NUMBER
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1751

6

DATE MAILED: 07/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/787,444

Applicant(s)

BUSCH ET AL.

Examiner

Preeti Kumar

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4-9 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-9 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Claims 2, 3, and 10 are canceled in light of applicant's request.
2. Claims 1, 4-9 and 11-13 are pending.
3. Acknowledgment is not made of applicant's claim for foreign priority based on an application filed as a PCT application on September 30, 1998 since applicant has not filed a certified copy of the PCT/US98/20491 prior foreign application as required by 35 U.S.C. 119(b).
4. 35 U.S.C 112 rejection of claims 5, 7-8 and 11-13 are withdrawn in light of applicant's amendment.
5. The rejection of claims 1, 4, 9, 11-13 rejected under 35 U.S.C. 102(b) as being anticipated by Lappas (EP0755999) is withdrawn in light of applicant's amendment.
6. The provisional double patenting rejection under 35 U.S.C. 101 as claiming the same invention as that of claims 1-9 and 18-20 of copending application no. 09/806,048 is withdrawn in light of applicant's amendment.
7. The rejection of claims 1, 4-6 and 8-9 rejected under 35 U.S.C. 103(a) as being unpatentable over Fowler et al. (US 6,268,196) is maintained for the reasons of record.

Specifically regarding the deposition aid of claim 1, Fowler et al. teach that a hydrolase such as cellulase or gluco-amylase may be incorporated into the detergent composition. Please see col.25, ln.1. Also, as recited in the first office action, Fowler et al. teach motivation of using a CBH I cellulose binding domain derived from *Trichoderma longibrachiatum* that when used in combination with some endoglucanase

Art Unit: 1751

(EG) type components, in a ratio of 2.5:1 of CBH I to EG components, the CBH I component of *Trichoderma longibrachiatum* imparts enhanced strength loss to the denim fabric. See col.10; ln.50-55. Furthermore Fowler et al. teach the use of antiredeposition polymers such as polyethylene glycol, polyvinyl alcohol, polyvinylpyrrolidone and carboxymethylcellulose. Please see col.26, ln.20-30.

Thereby, the broad teachings of Fowler et al. can be interpreted by one of ordinary skill in the art to teach a detergent composition comprising a gluco-amylase and an amino acid sequence of a CBD CBHI from *Trichoderma longibrachiatum* and an antiredeposition aid.

8. The rejection of claims 1, 4-6, 9 and 11-13 rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (WO 98/00500) is maintained for the reasons of record.

Jones et al. teach that suitable enzymes that may be used with the peptide/protein Deposition Aid include the proteases, amylases, and cellulases for incorporation in detergent compositions. See pg.14, ln.1-10 & claim 9. Also Jones et al. teach a preferred benefit agent is selected from a fabric softening agent, a perfume, a latex, a resin, an insecticide, a soil release agent, or a soil repelling agent. See pg.5 ln.5-15 & claim 10. Jones et al. also teach suitable linking agents are molecules which show a high affinity for the Benefit Agent. It is preferred if the linking agent is covalently attached to the peptide/protein Deposition Aid, it is also advantageous if the linking agent is covalently bound to the Benefit agent. Preferred linking agents are selected from various amino acid linking agents. See pg.7, ln.20-35 & pg.8, ln.1-3 & claims 2-4.

Furthermore, in example 2, Jones et al. demonstrate the use of the cellulase deposition system to deliver an anionic fabric conditioner to cotton using a cellulase obtained from *Trichoderma reesei*. Please see example 2, page 19.

9. The rejection of claim 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (WO 98/00500) in view of view of Fowler et al. (US 6,268,196) is maintained for the reasons of record.

Response to Arguments

10. Applicant's arguments filed in paper #5 on May 16, 2002, have been fully considered but they are not persuasive.

Applicants urge that Fowler et al. neither teaches nor suggests a detergent or fabric care composition comprising a polymer and a chemical entity comprising a deposition aid having a high affinity for cellulose and a benefit agent, wherein said deposition aid is an enzyme binding domain and said polymer is selected from the group recited in the instant claim 1. However, contrary to Applicants argument, Fowler et al. do suggest a detergent composition comprising a polymer and a chemical entity comprising a deposition aid having a high affinity for cellulose and a benefit agent. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a laundry detergent composition comprising a polymer and a chemical entity comprising a deposition aid having a high affinity for cellulose and a benefit agent, because Fowler et al. suggest a laundry detergent composition comprising a antiredeposition polymer and a chemical entity comprising a gluco-

amylase and a CBH I cellulose binding domain derived from *Trichoderma longibrachiatum*, having a high affinity for cellulose and a benefit agent.

Applicants also urge that Jones et al. neither teaches nor suggests the specific deposition aids of the invention, now required by amended claim 1. However, contrary to Applicant's argument, Jones et al. do suggest the specific deposition aids of the instant invention required by amended instant claim 1. Jones et al. do suggest a detergent composition comprising a polymer and a chemical entity comprising a deposition aid (such as amylase) having a high affinity for cellulose and a benefit agent. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a laundry detergent composition comprising a polymer and a chemical entity comprising a deposition aid having a high affinity for cellulose and a benefit agent, because Jones et al. suggest a laundry detergent composition comprising a antiredeposition agents such as cellulosic polymer and a chemical entity comprising a amylase or cellulase derived from *Trichoderma longibrachiatum*, having a high affinity for cellulose and a benefit agent.

Applicants also urge that Jones et al. in view of Fowler et al. neither teach nor suggest a detergent or fabric care composition comprising the specific deposition aids and suitable polymers as required by amended claim 1. However, contrary to Applicant's argument, Jones et al. in view of Fowler et al. do suggest a detergent or fabric care composition comprising the specific deposition aids and suitable polymers as required by amended claim 1. Specifically Jones et al. suggest the proper amylase

Art Unit: 1751

deposition aids and suitable soil release polymers, and Fowler et al. suggest the proper gluco-amylase deposition aids and suitable anti-redeposition polymers.

New Grounds of Rejection

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. as applied to claims 1, 4-6, 8-9 and 11-13 above, and further in view of Cao et al. (US 6,025,316).

Jones et al. are relied upon as set forth above. Specifically regarding the linking region of claim 7, Jones et al. teach non amino acid linking agents as their preferred linking agents (such as 1-ethyl-3-(3-dimethylaminopropyl)) which shows a high affinity for the benefit agent and is covalently attached to the peptide/protein deposition agent. However, Jones et al. do not specifically teach a linking region that is a polyethylene glycol derivative polymer as recited by the instant claim.

Cao et al. teach a detergent composition formulated for use in wash water over a wide range of pH in the washing bath. The compositions contain an anionic surfactant, optionally in combination with a nonionic surfactant with optimal builders and enzymes, and also contain at least one water soluble organic polymer, such as polyethylene glycol, which is miscible with or soluble in the surfactant. The presence of the water soluble polymer leads to enhanced fabric cleaning performance. See abstract. In example 1, formulation C and example 2, formulation F, Cao et al. illustrate that the PEG polymer linker not only can bind with conventional molecules such as surfactants and bring them close to the fabric surface, but can "link" also unconventional complex molecules such as enzymes. See col.10-11.

It would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to formulate a laundry care composition comprising a linking region polymer selected from a polyethylene glycol derivative as recited by the instant claim, with a reasonable expectation of success, since the teachings of Jones et al. in combination with Cao et al. suggest ~~a~~ a laundry care composition comprising a linking region polymer selected from a polyethylene glycol derivative as recited by the instant claim. One of ordinary skill in the art would have been motivated to combine the teachings of Cao et al. with that of Jones et al. to formulate a laundry detergent composition comprising a polymer and a chemical entity comprising a deposition aid having a high affinity for cellulose and linked to a benefit agent, because Cao et al. teach the benefit of using PEG polymers as a linker in detergent compositions to improve bio stain removal and Jones et al. teach non amino acid linkers in general.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 703-305-0178. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 703-308-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

PK
July 25, 2002

GREGORY DELCOTTO
PRIMARY EXAMINER

Preeti Kumar
Examiner
Art Unit 1751

